Docket

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
So. 157 Howard Street
Spokane, Washington 99204
August 26, 1964

Memorandum

To: Chief, Division of Exploration Operations

From: Acting Field Officer, Region I

Subject: OME-6337 (Silver)
Examination report
Fischer Mining Company
Big Horn, et al., Claims
Butte County, Idaho

INTRODUCTION

The Fischer Mining Company applied for OME assistance to explore for lead-silver ores in the Dome Mining District, Butte County, Idaho, by building three-eighths of a mile of access road and driving 280 feet of crosscut to intersect a vein about 20 feet below old workings. The applicant's estimate of the total cost of this proposal will be $11,400.00, of which the Government's share at 50 percent would be $5,700.00.

From data included in the application it appeared that it might be difficult to consider this as a legitimate silver project. In a letter dated January 10, 1964, the Acting Director asked the applicant if he could submit any evidence that would indicate that a dominant silver deposit rather than one of lead might be expected. His reply was not convincing and it was hoped that an on-site inspection might obtain a better answer.

During the evening of July 19, 1964, at Arco, Idaho, the examiner met with Ernest and George Fisher, two of the partners, and Don Boyer who accompanied them, to discuss certain problems relative to the application. The property was visited July 20, 1964, the available workings were inspected and mapped, and four samples were taken. About 4½ hours were spent on the property.

It is concluded, from all available assay data, that the average ratio of silver to lead is about 1 ounce of silver for each 5 percent of lead and that the chance of making a significant discovery is less than fair. It is therefore recommended that the application be denied.

See Pl. 1 + Fig. 1 in Envelope

PROPERTY, LOCATION, AND ACCESSIBILITY

The applicant was asked to submit a claim map and the book and page on which each claim was recorded. Figure 1 is a copy of the claim map submitted, but the recording data has not been received. As a denial is recommended, he was not asked a second time for the recording data.

The claims are at the north end of the Dome Mining District in secs. 17 and 20, T. 8 N., R. 29 E. Boise meridian (unsurveyed). The nearest supply and shipping point is Arco, Idaho, from which the claims may be reached by proceeding east on U. S. Highway 26 for 8 miles. Turn left and follow State Highway 22 northerly for 16 miles to the settlement of Howe. Continue northerly up Little Lost River Valley for 13 miles. From Arco to this point the road is paved. Here turn right on a fair gravel road for 6 miles to the Wilbert mine. From the Wilbert mine a jeep or other high center, 4-wheel drive vehicle is necessary to drive the remaining 3 miles or so to the property. The claims are between 9,200 and 9,600 feet above sea level and are not accessible from late fall to late spring.

The workings comprise an inclined shaft that is inaccessible and about which the applicant has little information; 3 small stopes caved to the surface, in 1 of which a caved inclined shaft is said to be 100 feet deep; and an adit tunnel about 150 feet long from near the face of which 5 feet of crosscut and about 40 feet of drift have been driven.

GEOLOGY

The rather complex geology of the area is described by:

Umpleby, J. B. (1917), Geology and Ore Deposits of the Mackay Region, Idaho: U. S. Geol. Survey Prof. Paper 97, p. 123

Ross, Clyde P. (1933), The Dome Mining District, Butte County, Idaho: Idaho Bur. of Mines and Geol. Pamphlet No. 39

Quartzites, shale, and dolomite of Ordovician age have been folded and faulted, the folds being overturned with both normal and thrust faulting complicating the sequence. The nearest known granitic masses are two small bodies of quartz diorite, one 30 miles to the west, the other 50 miles to the north. Ore-bearing solutions probably moved along the fault planes forming deposits therein and replacement deposits in quartzite beds. Many of the ore bodies appear to be associated with manganese oxides in the adjacent wall rock.

The largest known ore deposit is in the Wilbert mine, and the next largest is at the Great Western mine about 1.5 miles south of the Wilbert. The Johnson mine about 2 air miles northwest of the Wilbert is mentioned as is the South Creek mine about 5 air miles to the south, but the only production figures given are those for the Wilbert mine and those for the district as a whole. The applicant's property, also known as the Meadow mine is said to be between the Johnson and the Wilbert mines, and is about 1½ miles northerly from the Wilbert.

All workings indicated by the applicant are on the Big Horn claim (fig. 1 and pl. 1). The westernmost working is a shaft 8' x 10' in section, inclined at about 58° in quartzite. According to the applicant, W. R. Jones sank this shaft 100 feet and shipped 5 cars of ore of unknown grade. As there were no ladders to permit entering the shaft, this report could not be checked. From the size of the dump area it could well have been 100 feet deep with some lateral workings. The applicant reported that according to Jones the shaft bottomed in an 8-foot mineral zone comprising 7 feet that assayed 6 percent lead and 2 ounces silver per ton and 8 to 12 inches that assayed 52 to 78 percent lead and averaged 17 ounces silver. The indicated weighted average over the 8 feet is 3.5 ounces silver per ton and 12.2 percent lead. Fifteen feet northerly from the shaft is a small cut in quartzite. No mineralized structure could be identified in either the shaft or the cut; although massive, the quartzite appeared to dip about 60° northerly.

From about 130 to 180 feet northeasterly from the shaft are 3 small stopes that have caved to the surface. Respectively, they are about 15, 5, and 12 feet long and are filled with caved debris to within about 10 feet of the surface. The westernmost of the 3 stoped caves is on a structure that strikes S. 78° W. and dips 50° northerly; the other 2 are on a structure that strikes N. 80° W. and dips 55° northerly. The only ore minerals seen in the three caved stopes was a small pod of galena at the west end of the easternmost stope. Near the center of the easternmost stope a ladder and skids continue into the debris that makes up the stope floor, indicating a small shaft. There was not enough mineralization in the sheared zone in the stopes to justify a sample. The structure is a shear zone up to 2 feet wide with a fine-grained grey shaly limestone(?) on the hanging wall and quartzite on the footwall. There are two small piles of sorted ore on the dump, said to have come from the vinze. A composite sample of the 2 piles assayed trace gold and 7.5 ounces silver per ton and 25.1 percent lead. A sample of selected high grade from one pile assayed trace gold and 9.4 ounces silver per ton and 37.9 percent lead.

About 115 feet northwesterly of these workings is the portal of a 150-foot adit in shaly limestone. Near the face of the adit a crosscut has been driven about 10 feet southerly; a small drift from the crosscut extends 5 feet westerly and 30 feet easterly. The vein is for the most part clay gouge from less than a quarter inch to about 4 inches wide which both splits and dies out on strike. In general, the structures strike N. 60°-75° W. and dip 47°-66° southerly. Therefore, this is not the same vein as the one previously described. According to the applicant, W. R. Jones is said to have shipped, in 1902, 16 tons of ore assaying 17 ounces silver per ton and 52 percent lead from a "pocket of highgrade." This apparently was a quartz lens about 10 feet long, 2 feet wide and along the south side of the adit starting about 20 feet from the portal. It was not feasible to take a sample at this part of the drift, but one was taken from the same structure about 25 feet farther to the west. It assayed trace gold and 0.15 ounce silver per ton and trace lead.

From what was observed on the property and from reports of shipments therefrom, it is doubtful that the applicant's proposed crosscut with additional drifting will result in a significant discovery. A comparison of assays of samples from this property with the indicated ore tenor at the Wilbert mine and from the district as a whole do not indicate much chance that any discovery could be called a dominant silver deposit. For example:

1. Ross (1933) presents a table prepared by H. S. Knight which indicates that from the time of its discovery, about 1882, to January 1, 1930, the Wilbert mine produced a total of 341,708 ounces silver and 31,249,637 pounds of lead from 100,993 tons of ore reduced to 29,753 tons of concentrate. Disregarding possible silver and lead loss in mill recovery, this would indicate an average grade of 3.38 ounces silver per ton and 15.47 percent lead or a silver-to-lead ratio of 1 ounce per 4.6 percent.

2. Ross also presents a table prepared by the U. S. Bureau of Mines in which the total production from the district from 1906 to 1928 is given as 88,556 tons with an average grade of 3.12 ounces silver per ton and 18.24 percent lead or a silver-to-lead ratio of 1 ounce per 5.8 percent.

3. Umpleby (1917) states that from May through June 20, 1912, the Wilbert mine produced 2,400 tons of ore reduced to 300 tons of concentrate with an average grade of 9 ounces silver and 51-53 percent lead. Disregarding possible silver and lead loss in mill recovery and using the average of 52 percent for lead, the indicated silver-to-lead ratio is 1:5.8.

4. Umpleby also states that during 1913 the Wilbert mine produced 18,223 tons of ore with an average grade 2.8 ounces silver and 29 percent lead or a silver-to-lead ratio of 1:10.4.

5. In his letter to two banks the applicant refers to ore at the bottom of the shaft sunk by W. R. Jones in 1902 as comprising:

Low grade - 2 ounces silver per ton and 6 percent lead

High grade - 17 ounces silver per ton and 52-78 (average 65) percent lead

Using the respective widths of these two shoots as given to the examiner and cited above, the average grade over this ore width is 3.5 ounces silver per ton and 12.2 percent lead, a silver-to-lead ratio of 1:3.5.

6. Ore shipped by W. R. Jones from the adit according to the applicant had an average grade of 17 ounces silver per ton and 52 percent lead or a silver-to-lead ratio of 1:3.0.

7. Two stockpiles on the dump near the caved stopes sampled by the examiner contained:

7.5 ounces silver per ton and 25.1 percent lead

9.4 ounces silver per ton and 37.9 percent lead

The mathematical average of these two assays is 8.45 ounces silver per ton and 31.5 percent lead, a silver-to-lead ratio of 1:3.7.

An average of all the above silver-to-lead ratios indicates an overall, that is district and applicant's property, ratio that is 1:5.2. The average of the grade of the total production from the Wilbert mine given in the table presented by Ross is 3.38 ounces silver per ton and 15.47 percent lead; the average grade of the two production periods given by Umpleby is 3.52 ounces silver per ton and 31.68 percent lead. As Umpleby's figures are for 1912 and and 1913 and Ross' figures are from 1882 through 1929, it does not appear very probable that silver or lead values increase appreciably with depth.

CONCLUSIONS

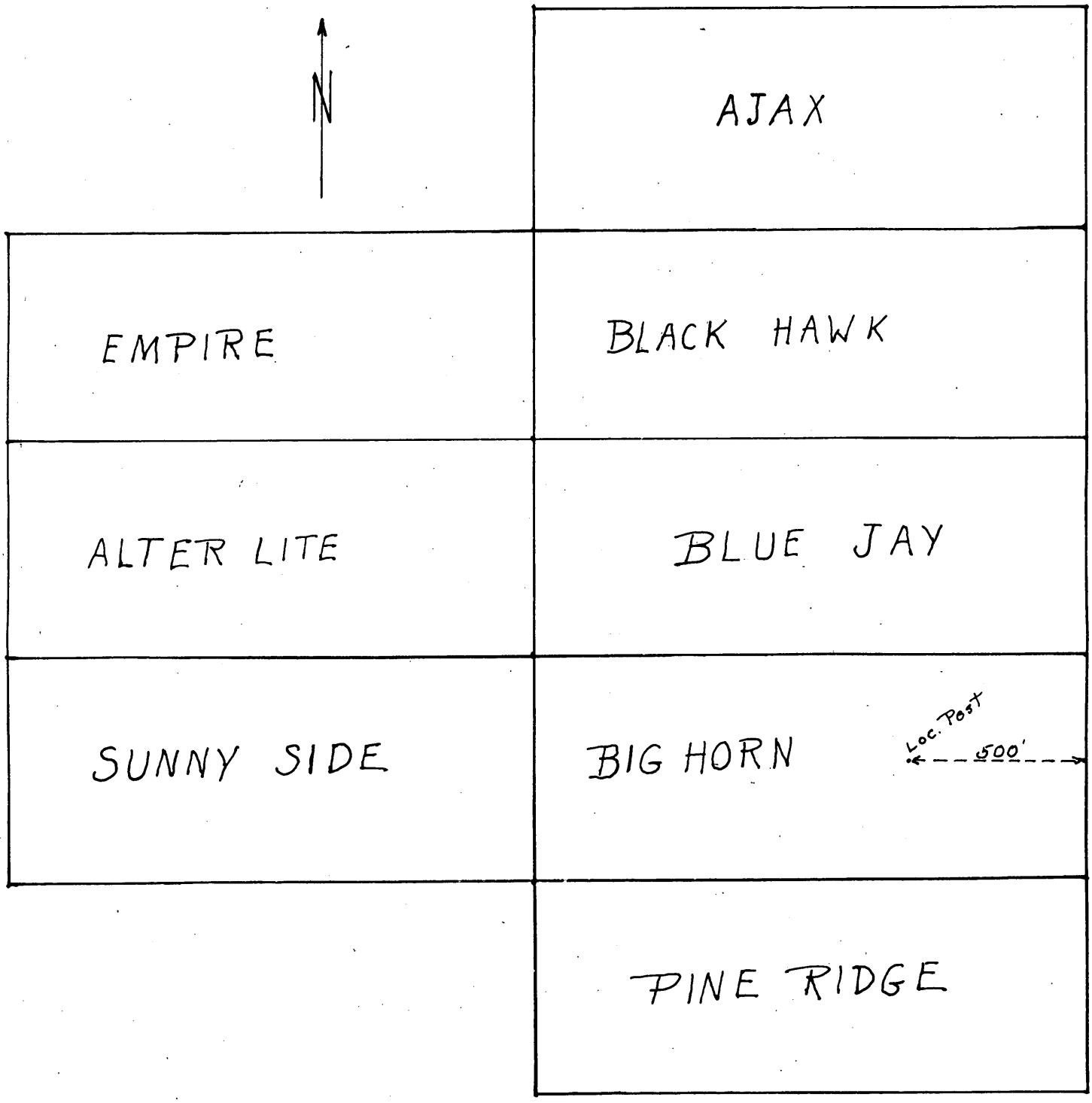
It is concluded that the chance of a significant discovery resulting from the applicant's proposal is less than fair and that the dominant commodity of any discovery will be lead.

It is therefore recommended that the application be denied.

D. R. MacLaren

Enclosures
Distribution:
CMB(2); USGS(SRO)
Docket; MacLaren

OME-6337



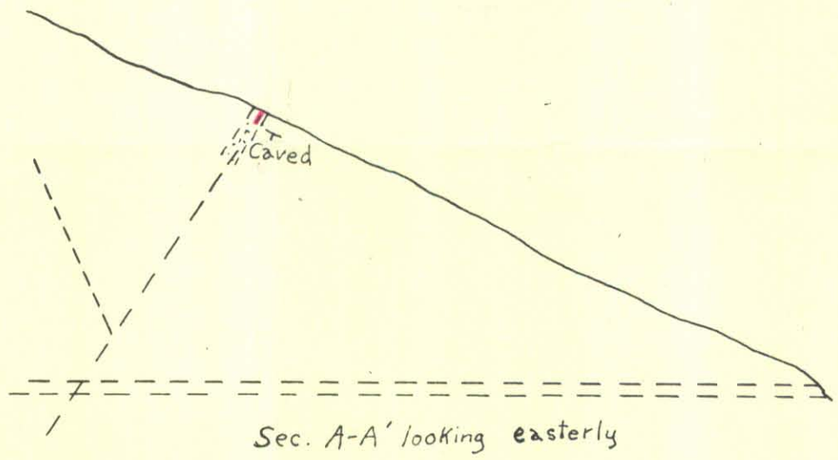
CLAIM MAP
Fischer Mining Company
Bette County Idaho
400 200 0 400 Feet

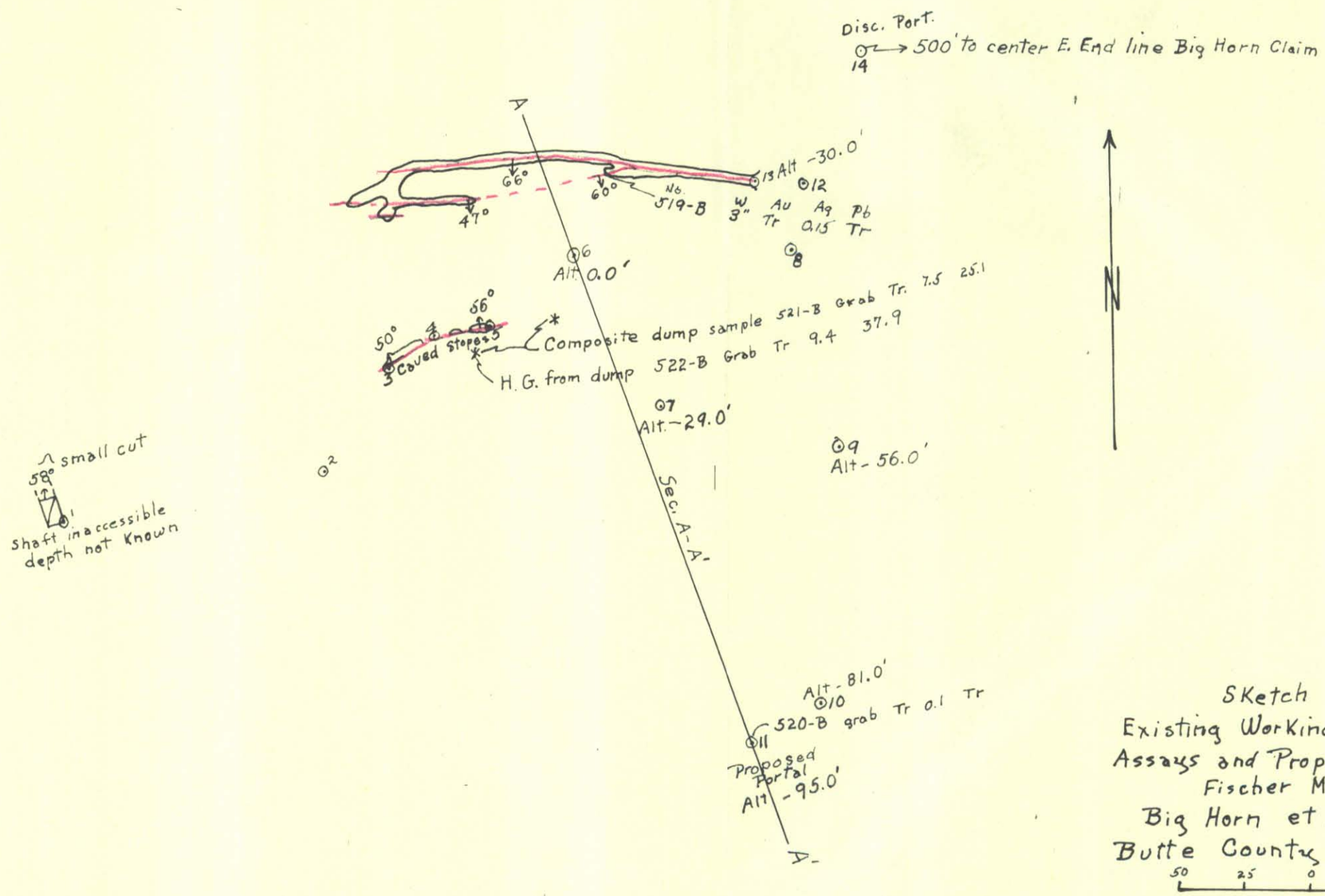
Fig. 1.

U.S. Department of the Interior

Office of Minerals Exploration
Application Examination Report

O.M.E-6337





Sketch Showing
Existing Workings, Sample Locations,
Assays and Proposed Crosscut Portal
Fischer Mining Co.
Big Horn et al., Claims
Butte County Idaho

50 25 0 50 Feet

Plate 1
July, 1964